

Subject

New COMPAQ DESKPRO* System Board Design

DESCRIPTION

COMPAQ DESKPRO Personal Computers are now being manufactured with a new style system board. One of the features of this new board allows more flexibility in configuring memory. Refer to the following General and Memory Information for the various changes.

PART NUMBER INFORMATION

Because previous releases of the system board are still being used, the serial number of the system unit determines which part number is required when ordering replacement system boards.

1. If the serial number of the system unit is Y6185XXXXXX or greater (where Y is 3 or 4 and X is alphanumeric), order P/N 106374-001.
2. If the serial number of the system unit is less than Y6185XXXXXX and the keyboard interface connector is riveted to the chassis sheet metal, order P/N 105191-001.
3. If the serial number of the system unit is less than Y6185XXXXXX and the keyboard interface connector is soldered to the system board, order P/N 101339-001.

GENERAL INFORMATION

Switch settings for switch bank SW1 remain unchanged. For definitions of these switch settings, reference the configuration label on the top of the storage drive housing in the system unit or the COMPAQ Desktop Computers Maintenance and Service Guide.

The keyboard and monitor fuses, F102 and F101, are now soldered to the system board. If either of these fuses blow, it is necessary to replace the entire system board.

All other connectors are the same as on previous versions of the system board. This new board is easily identifiable by a small bullet containing a "3" in the lower right corner of the board.

MEMORY INFORMATION

Bank 0 is 128 Kbytes of soldered-in memory consisting of four 64Kx4 DRAM chips with two 64Kx1 DRAM chips for the parity bits.

Bank 1 is unchanged. It consists of 18 sockets, which can be populated with 64Kx1 DRAM chips for 256 Kbytes of memory or populated with 256Kx1 DRAM chips for 640 Kbytes of memory.

PARITY CHIP SOCKETS U109 AND U110 MUST BE POPULATED WITH DRAM CHIPS TO PREVENT MEMORY ERROR RESULTS AT POWER ON. THESE SOCKETS ARE COMMON TO BANK 1 AND ALTERNATE BANK 1.

Alternate Bank 1 is located above the soldered-in RAM. It consists of four sockets (locations U90, U91, U94, and U95), which can be populated with 64Kx4 DRAM chips. If this option is used, the parity chip sockets located at U109 and U110 in Bank 1 must contain 64Kx1 DRAM chips. To change from Bank 1 to Alternate Bank 1, or vice versa, rotate the shunt module located at U118 180 degrees. Connecting pins 5-12, 6-11, 7-10, and 8-9 enables Alternate Bank 1. Connecting pins 1-16, 2-15, 3-14, and 4-13 enables Bank 1.

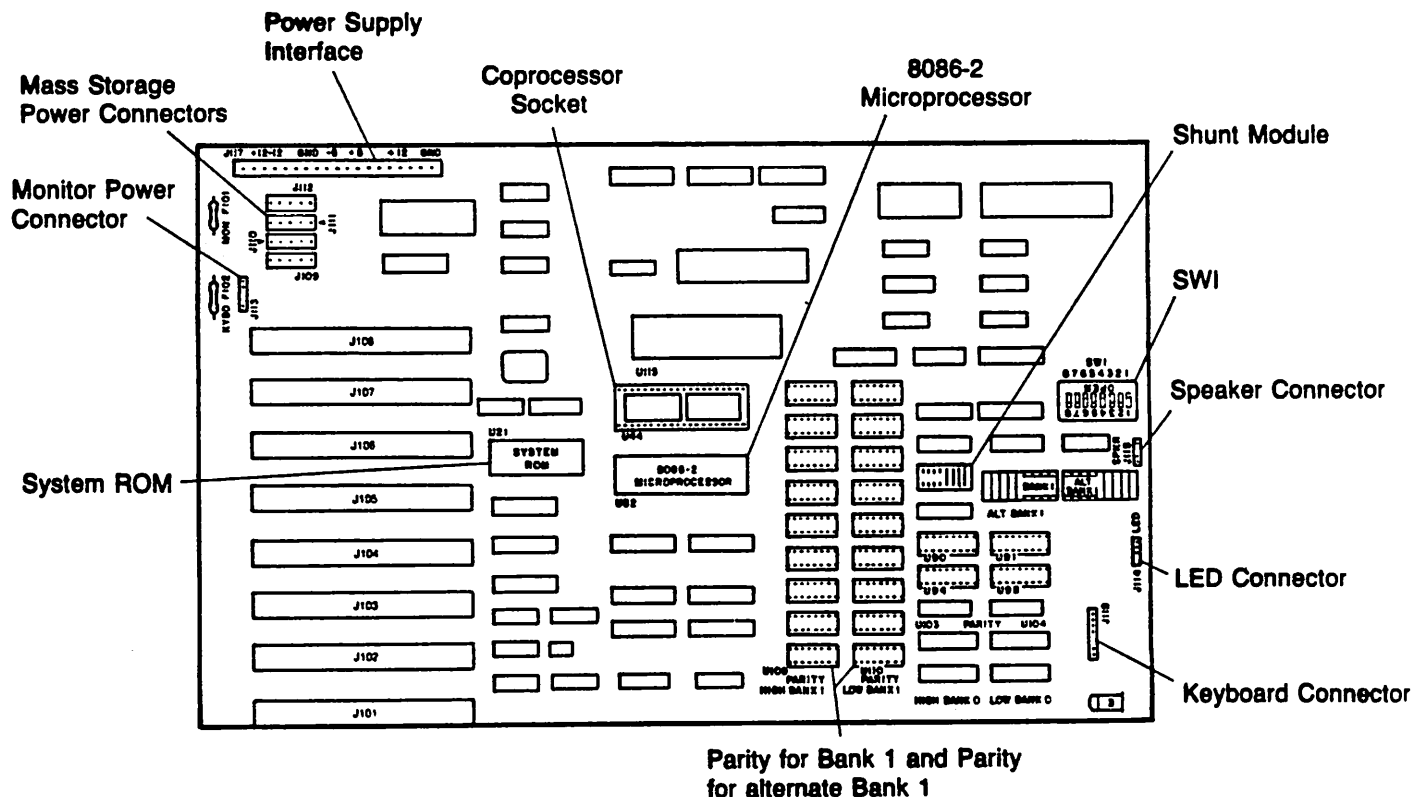


Figure 1

ERROR CODE INFORMATION

The following figures identify error code messages and required action for each message. Figures 2-1, 2-2, and 2-3 list error codes for the new style system board, which can be identified by the bullet containing the "3" in the lower right corner of the board. Figure 3 lists error codes for the previous versions of the system board.

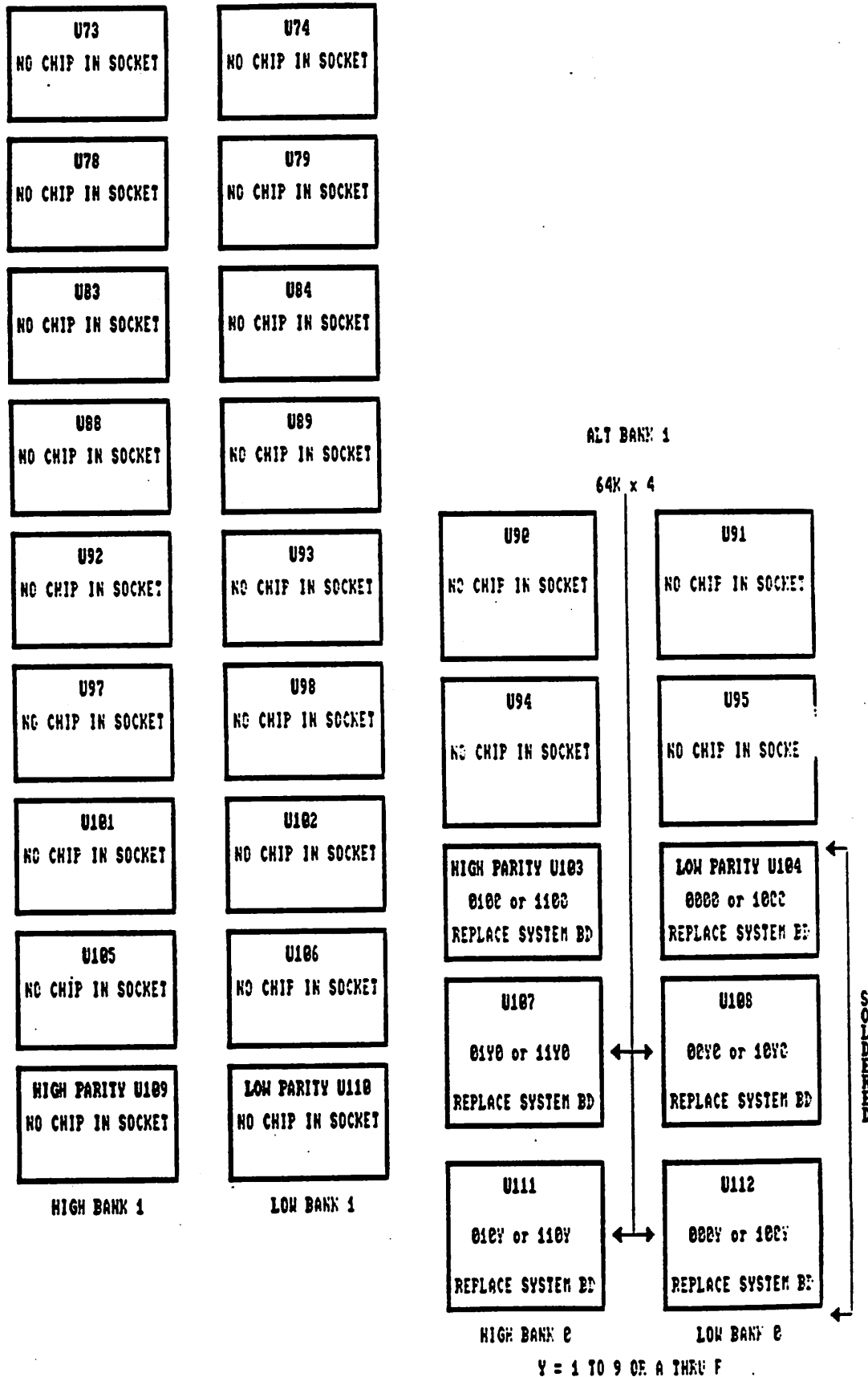
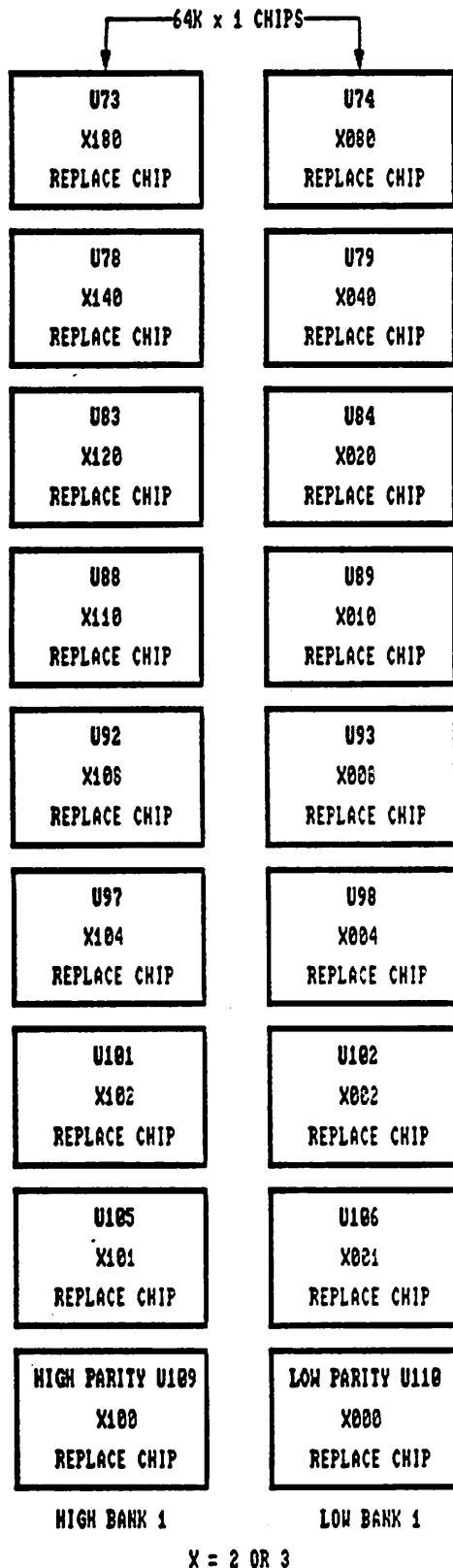


FIGURE 2-1. POST RAM MEMORY ERROR CODES



NOTE: 256K IS POSSIBLE WITH TWO CONFIGURATIONS:

A: 64K X 1 CHIPS IN BANK 1
AND 64K X 4 CHIPS IN BANK 0.

B: 64K X 4 CHIPS IN ALTERNATE BANK 1
AND 64K X 4 CHIPS IN BANK 0.

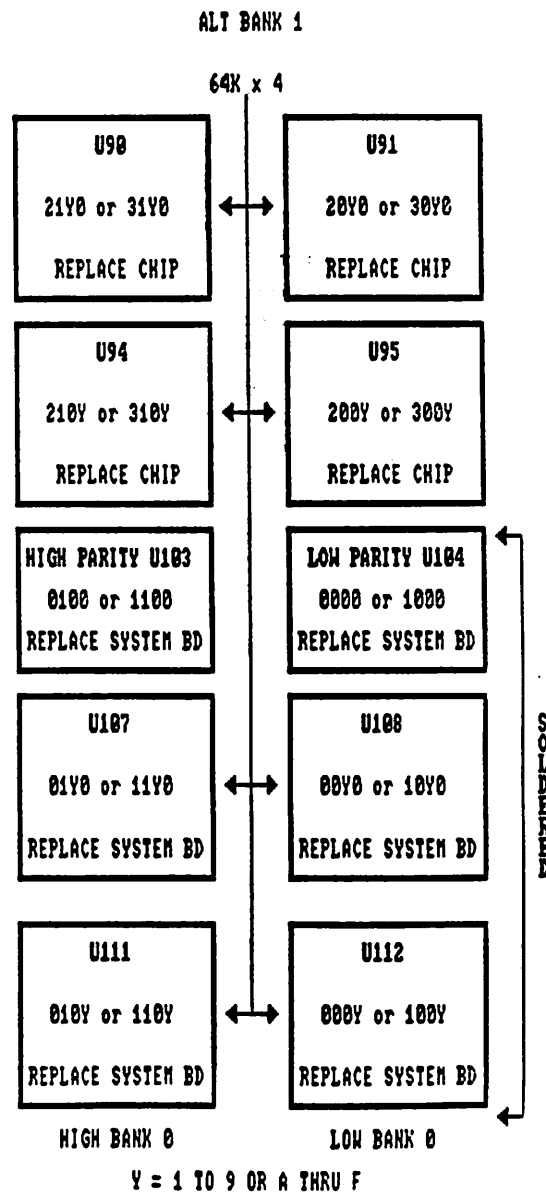


FIGURE 2-2. POST RAM MEMORY ERROR CODES

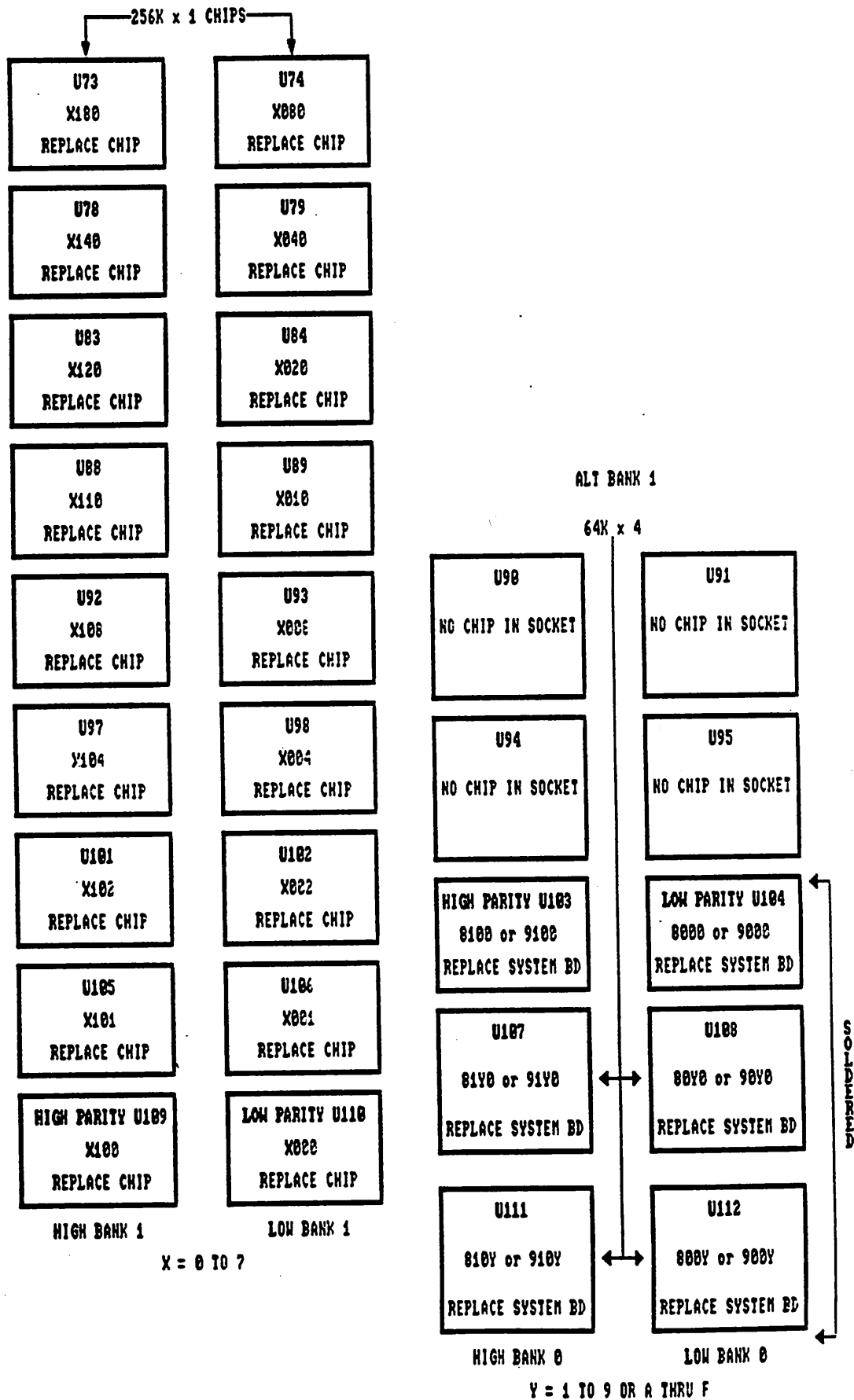


FIGURE 2-3. POST RAM MEMORY ERROR CODES

HIGH BANK 1	LOW BANK 1	HIGH BANK 0	LOW BANK 0
U73 X100 REPLACE CHIP	U74 X000 REPLACE CHIP	U75 0100 OR 1100 REPLACE SYSTEM BD	U76 0000 OR 1000 REPLACE SYSTEM BD
U78 X140 REPLACE CHIP	U79 X040 REPLACE CHIP	U80 0140 OR 1140 REPLACE SYSTEM BD	U81 0040 OR 1040 REPLACE SYSTEM BD
U83 X120 REPLACE CHIP	U84 X020 REPLACE CHIP	U85 0120 OR 1120 REPLACE SYSTEM BD	U86 0020 OR 1020 REPLACE SYSTEM BD
U88 X110 REPLACE CHIP	U89 X010 REPLACE CHIP	U90 0110 OR 1110 REPLACE SYSTEM BD	U91 0010 OR 1010 REPLACE SYSTEM BD
U92 X106 REPLACE CHIP	U93 X006 REPLACE CHIP	U94 0106 OR 1106 REPLACE SYSTEM BD	U95 0006 OR 1006 REPLACE SYSTEM BD
U97 X104 REPLACE CHIP	U98 X004 REPLACE CHIP	U99 0104 OR 1104 REPLACE SYSTEM BD	U100 0004 OR 1004 REPLACE SYSTEM BD
U101 X102 REPLACE CHIP	U102 X002 REPLACE CHIP	U103 0102 OR 1102 REPLACE SYSTEM BD	U104 0002 OR 1002 REPLACE SYSTEM BD
U105 X101 REPLACE CHIP	U106 X001 REPLACE CHIP	U107 0101 OR 1101 REPLACE SYSTEM BD	U108 0001 OR 1001 REPLACE SYSTEM BD
HIGH PARITY U109 X100 REPLACE CHIP	LOW PARITY U110 X000 REPLACE CHIP	HIGH PARITY U111 0100 OR 1100 REPLACE SYSTEM BD	LOW PARITY U112 0000 OR 1000 REPLACE SYSTEM BD

SOLDER

X IS ANY NUMBER BETWEEN 2 AND 9

FIGURE 3. POST RAM MEMORY ERROR CODES